INTERSTATE 405 Corridor Program
Congestion Relief & Bus Rapid Transit Projects

APPENDIX W4

Wetlands Implementing Agreement (July 1993)

I-405, SR520 to SR522 Stage 1 (Kirkland Stage 1)

Request For Proposal
July 15, 2005

Washington State Department of Transportation

Implementing Agreement
between
The Washington State Department Of Transportation
and
The Washington State Department of Ecology
Concerning Wetlands Protection & Management

July 1, 1993

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I. Authority

This implementing agreement is being adopted pursuant to the Memorandum of Understanding (MOU) between the Department of Ecology (Ecology) and the Department of Transportation (WSDOT), dated August 4, 1988.

Ecology's responsibilities include statewide wetlands protection and management; the agency's regulatory authority derives from Sections 401 and 404 of the federal Water Pollution Control Act (the Clean Water Act), the federal Coastal Zone Management Act (CZMA), Chapter 90.48 RCW (Water Pollution Control), and Chapter 90.58 RCW (Shoreline Management Act of 1971). RCW 90.58.300 designates Ecology to administer the state responsibilities under the federal CZMA. Ecology is also responsible for overseeing implementation of the State Environmental Policy Act (SEPA – Chapter 43.21C RCW), which interacts with wetlands laws and regulations. Governor's Executive Order 81-18, revised in 1985, directs Ecology to be the state coordinator responsible for issuance of all state Water Quality Certifications under Section 401 of the federal Clean Water Act. Under the same Executive Order, Ecology is also responsible for the state's response on other activities under the federal Clean Water Act, National Environmental Policy Act (NEPA), and SEPA.

WSDOT is responsible for designing, constructing, and maintaining a safe, state multi-modal transportation system in a manner that complies and is consistent with environmental laws and regulations, including those pertaining to wetlands.

II. Purpose

The 1988 MOU states that the responsibilities of the two agencies require coordination of technical and environmental information to provide for a timely and efficient review of environmental documents and permit applications. Implementing agreements are intended as supplements to the MOU, to describe specific procedures to enhance coordination and cooperation.

WSDOT and Ecology recognize that this implementing agreement, which addresses only wetland protection issues, is one of several steps required to attain coordination and cooperation in all areas of environmental protection. Both agencies are committed to integrating stormwater control, habitat protection, fisheries, and other environmental issues into a coordinated procedure, either in subsequent agreements or through the appropriate permitting process(es).

The purpose of this implementing agreement is to clarify and promote interagency coordination in wetlands protection and management in the following areas: review of proposed projects, permit compliance, and wetland mitigation guidelines. This agreement includes guidelines for standard information to be submitted with project proposals, which will allow for project review and permit decisions to occur in a timely manner. This agreement also institutes a wetlands training program to benefit staff from both agencies, and establishes a process for conflict resolution.

III. General Coordination Process

This section contains descriptions of the various meetings and field visits that will be used to effect interagency coordination in wetlands protection and management at the project level. The next section contains detailed procedures for coordination before, during, and after the permit application process.

To facilitate contacts between agencies, a list of staff positions involved in wetlands work, with telephone numbers, is included as Appendix A to this agreement. Normal procedure will be for WSDOT district staff to coordinate with Ecology Wetlands Section and Permit Coordination Unit staff assigned to the area where the project is located.* Section VII of this agreement outlines the procedure to be followed should the need arise to elevate contacts.

This agreement lists a series of meetings that will provide opportunities for staff from both agencies to review and discuss proposed projects that impact wetlands. In addition to these meetings, other contacts such as telephone calls and sharing of documents is encouraged.

The meetings progress from those that are general in nature and cover many projects, to meetings that are very specific, covering one, or a few, projects. The timing of the meetings provides sufficient time to revise a project if the wetland impact warrants a change, while still keeping the project on schedule. (It is understood that environmental concerns other than wetlands issues, if not addressed simultaneously, may affect the project's schedule.) The meetings are listed below in chronological order:

(a) **Biennial Project Review Meetings**: The purpose of these meetings is to discuss, in general terms, potential environmental impacts (including all wetland impacts) of proposed projects; and to provide an opportunity for resource agencies to supply information on affected resources that may influence a project's schedule or budget. These meetings will be held in even-numbered years when project prospectus and preliminary project budgets are being developed. The meetings are conducted by each WSDOT district, and attended by WSDOT staff from the headquarters Environmental Branch and district Project Development offices, Ecology Wetlands and Permit Coordination staff responsible for that area, and Shoreline Management Section staff. Staff from other resource management agencies may also attend. Ecology Permit Coordination staff will then brief other affected Ecology staff, if applicable.

(b) **Design Alternatives Meeting**: These meetings are held on an as-needed basis to discuss specific projects, and to revisit projects discussed earlier. The need for this meeting is based on the scope of the project and magnitude and type of wetland impacts. The wetland report prepared by WSDOT will be sent to Ecology for review prior to holding a design alternatives meeting. A field review and/or future meeting may be needed to complete the necessary coordination.

(c) **Pre-Application Meeting**: These meetings are held to review preliminary mitigation plan development and submittal of information needed by the Corps of Engineers and other agencies to make permit decisions. These meetings may be called by WSDOT, the Corps of Engineers, or Ecology, depending on project magnitude or type of permit. Other agencies, as appropriate, are invited to participate.

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* The Permit Coordination Unit within Ecology's Environmental Review Section is responsible for administering the water quality certification program pursuant to Section 401 of the federal Water Pollution Control Act.

(d) **Pre-Construction Conference**: These meetings are held on an as-needed basis to discuss construction techniques for wetland creation, restoration, or enhancement, for individual projects. The need for such a meeting is based upon the degree of difficulty anticipated in constructing the wetland, the use of unconventional construction techniques, or contractor unfamiliarity with constructing wetlands. It is understood by the parties involved that this meeting is primarily for the benefit of the contractor, and that the contract cannot be changed. This meeting may be held as part of the WSDOT/Contractor Pre-Construction Conference conducted for all WSDOT projects, or it could be a separate meeting if the sub-contractor responsible for wetland construction has not been chosen by the time of the Pre-Construction Conference. If needed, the meeting will involve Ecology Wetlands and Permit Coordination staff responsible for the project area, and WSDOT district construction and biology staff.

IV. Project Coordination

The 1987 manual prepared by the U.S. Army Corps of Engineers for wetland delineation will be used for wetland projects requiring compliance with Sections 404 and 401of the Clean Water Act. Ecology requires use of the 1989 joint federal manual for wetland delineation for wetland projects requiring state approval under Chapters 90.58 RCW (the Shoreline Management Act) and 90.48 RCW (Water Pollution Control), or other applicable state laws.

The following procedure pertains only to wetland actions between WSDOT and Ecology. It is not meant to cover the coordination that is required with other Ecology programs, such as stormwater control or shorelands management, or with other state or federal agencies, and it does not pertain to non-wetland issues, even though these non-wetland activities may require a §401 water quality certification.

Appendix B is a flow chart entitled *Documents of the Project Development Process* that shows the engineering and wetland processes in parallel. This flow chart will serve as an aid in understanding the following procedure.

WSDOT	1.	WSDOT conducts the Biennial Project Review meeting (see above for more explanation).
Ecology	2.	Ecology attends the Biennial Project Review meeting.
WSDOT	3.	WSDOT submits the wetland inventory report to Ecology for review and comment. This report will be sent to Ecology when the following permits are required: §404 individual permit, §404 nationwide permit that needs an individual water quality certification, or a shoreline permit. The report is submitted to the Ecology Wetlands Section, with a copy to the Ecology Environmental Review Section.
WSDOT	4.	WSDOT conducts a Highway Design Alternatives meeting, if necessary (see above for more explanation). This meeting could be a conference call, or could be held in the field.
Ecology	5.	Ecology attends the Design Alternatives meeting and provides written comments and recommendation on the wetlands inventory report and alternatives as soon as possible but within 30 days of the meeting. If a Design Alternatives meeting is not held, Ecology will respond within 30 days of receipt of the wetlands inventory report. This response may be a request for additional information or a request for a joint site visit. If Ecology requests additional information, Ecology will then have 15 additional days to comment after receipt of the information.

WSDOT 6. WSDOT submits the preliminary wetland mitigation plan with the wetland report and alternatives analysis to Ecology wetlands staff, with a copy to the Ecology Permit Coordination Unit, if a §404 permit is required, for review and comment.

Note: From this point on in the process, a distinction is made between §404 individual permits and nationwide permits requiring an individual water quality certification (WQC). The distinction is made because in the latter case, Ecology issues the public notice and coordinates the response to the project proposal. Also, it is understood that in both cases a project proposal can change between application submittal and issuance of the public notice.

Ecology 7.(a) If a §404 individual permit is required, Ecology Permit Coordination staff will respond within 45 days. During this 45-day review period, Ecology Permit Coordination staff will coordinate with other programs and agencies.

7.(b) If a §404 nationwide permit with an individual WQC is required, Ecology Wetlands staff will review the documents listed in No. 6 above, and respond in writing within 45 days.

The Ecology response may:

- Provide approval, conditional on the following factors: The preliminary mitigation plan package will not substantially change; the final detailed mitigation plan will adequately demonstrate the likely success of the mitigation project.
- Ask for more information.
- Ask for a pre-application meeting and/or field visit.

Both 8. A pre-application meeting is held as needed. If an individual permit is required, the meeting may be conducted by the Corps of Engineers or WSDOT, depending upon the magnitude of project impacts. If the required permit is a nationwide permit with an individual WQC, the meeting will be conducted by the Ecology Permit Coordination Unit.

WSDOT 9.(a) If a §404 individual permit is required, WSDOT submits the application to the Corps of Engineers with the final mitigation plan. A copy is sent to the Ecology Permit Coordination Unit.

9.(b) If a §404 nationwide permit with an individual WQC is required, WSDOT submits the permit application to the Ecology Permit Coordination Unit with the final mitigation plan. Ecology will issue the public notice within 5 working days of determining that the application is complete.

Ecology 10.(a) If a §404 individual permit is required, the Permit Coordination Unit responds to the Corps of Engineers within 30 days of the Corps of Engineers Public Notice, either by issuing a Water Quality Certification and/or a CZMA consistency determination, or by requesting an extension. A request for extension may be necessary to: allow for review of additional information; meet requests of other state agencies; complete coordination with all Ecology programs and/or state agencies; and/or make a CZMA consistency determination. If an extension is requested, Ecology will notify WSDOT of the reasons for the request.

10.(b) If a §404 nationwide permit with an individual WQC is required, the Permit Coordination Unit will respond directly to WSDOT within 31 days of issuing the Public Notice. The response will either be issuance of the Water Quality Certification and/or determination of CZMA consistency, or a notification to WSDOT that unresolved issues still exist.

WSDOT 11. WSDOT will coordinate with Ecology, and other agencies as necessary, to provide the information needed to address unresolved issues.

Ecology 12. Under normal circumstances, the Ecology Permit Coordination Unit will issue the §401 Water Quality Certification to WSDOT as soon as possible after issuance of the Public Notice, but no later than within 120 days (for non-coastal counties) or 180 days (for coastal counties). (Note: The federal Clean Water Act authorizes states to issue §401 WQCs to §404 permits within a year of the Public Notice publication.)

In those situations where Ecology is waiting for a local government to take action pursuant to the Shoreline Management Act, Ecology will issue the §401 WQC within 31 days of the local action for permitted uses, or within 31 days of the Ecology decision for Conditional Uses and Variances, if no appeals are filed. (The 31 days allow for the regulatory requirement of a 30-day appeal period under the state Shoreline Management Act and the CZMA consistency concurrence review.) If a local shoreline permit is appealed, Ecology will issue the §401 WQC within 10 days of the State Shoreline Hearings Board decision, unless Ecology is a party to the appeal or Ecology appeals to the Superior Court. As applicable, Ecology will issue, instead of or in addition to a §401 WQC, a state concurrence or objection to a consistency certification under the Coastal Zone Management Act.

Information needed by Ecology to make decisions on permit matters is included in guidance documents made part of this agreement as Appendices C and D. WSDOT use of this guidance in preparing materials to be reviewed by Ecology will ensure that adequate information is provided at the appropriate step. This, in turn, will ensure a timely response from Ecology.

V. Wetland Mitigation

Both agencies agree that wetland mitigation is a series of steps followed in sequence to eliminate, reduce, and/or compensate for wetland impacts. The steps of mitigation, in decreasing order of preference, are as follows:

(a) Avoiding the impact altogether by not taking a certain action or part of an action;

(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts;

(c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action;

(e) Compensating for the impact by replacing, enhancing, or providing substitute wetland resources or environments;

(f) Monitoring the mitigation by systematic evaluation of the development of a constructed wetland to determine success.

Both agencies agree that standard information on mitigation proposals is needed to fully understand the proposal and make informed decisions. Guidelines developed by Ecology for the contents of wetland reports and mitigation plans are included as Appendices C and D to this agreement.

Mitigation for unavoidable impacts to wetlands will be based on the ratios given in Appendix E. The ratios are intended to be used as a guideline under average conditions and may be altered on a case-by-case basis by joint agreement, if unique conditions are present at the impact site or the mitigation site.

The compensation ratios are based on the category of the wetland impacted (using the Department of Ecology Wetland Rating System) and the proposed category of the wetland to be created, restored, or enhanced. The ratios are for IN-KIND compensation only. Compensation for wetlands will be negotiated case-by-case for OUT-OF-KIND compensation, or if the impacted wetland's vegetation is dominated ($\geq$80% cover) by any of the invasive/exotic species listed in Appendix F.

The preliminary and final mitigation plans submitted by WSDOT will include a summary table showing how the ratios have been applied. The "category" of the impacted wetland will be listed, as will its Cowardin class and subclass, and the ratio applied from Appendix E. The plan will also include the information necessary to estimate the "category" of the mitigation site, using the Ecology rating system, when all performance standards have been met. Copies of completed data sheets from the rating system will be included, and brief comments justifying each answer are to be provided.

PRESERVATION may be used in combination with one or more of the following: restoration, creation, or enhancement, to have the net effect of reducing the ratios given in Appendix E. Preservation can be especially useful when there is not enough property on the project site to meet the replacement ratios, or there are some other difficulties in creating a wetland of sufficient size on site. A detailed explanation of how the preservation approach works is found in Appendix E.

Intentionally created wet areas constructed on non-wetland sites for the purpose of treating or conveying irrigation water, roadway drainage, or wastewater, or for surface water detention facilities, shall not be considered jurisdictional wetlands nor shall they be considered as sites for compensatory mitigation. This also includes grass lined ditches, filter strips, and active borrow pits. Documentation for these sites will be on labeled plan sheets on file at WSDOT.

VI. Mitigation Banking

Any mitigation banking activities will comply with the provisions of the mitigation banking agreement currently being developed by WSDOT, Ecology, and other agencies.

VII. Training

Ecology and WSDOT will provide training on the following topics to staff in both agencies:

- Field methods for wetland identification and delineation
- Techniques for assessment of wetland values and functions
- Design of mitigation plans; writing mitigation plan reports

- WSDOT project development process and procedures

- Corps of Engineers and Ecology permit processes

In addition, WSDOT will invite Ecology and other resource management agencies to participate in an annual field review and evaluation of WSDOT mitigation sites.

VIII. Conflict Resolution

In the 1988 MOU, WSDOT and Ecology agreed to "Resolve conflicts at the field level. In the event that issues cannot be agreed upon by field personnel, both parties agree to elevate the issues to equivalent levels within each organization, for further discussion and, if necessary, to the Director of Ecology and Secretary of DOT." The parties further agree that it is in the interest of both agencies to resolve conflicts in an interagency manner, according to the following procedure.

Level One: Conflict resolution is attempted by communication between the WSDOT headquarters and district biologist, or Environmental Manager, and the Ecology regional wetlands biologist, or headquarters wetlands biologist if the region does not have one. The Ecology Permit Coordination Unit will be notified of the situation.

Level Two: Conflict resolution is attempted by communication between the WSDOT Project Development Engineer, or equivalent, and the Ecology Wetlands Technical Unit Supervisor. WSDOT headquarters Environmental Branch personnel may be involved at this level. The Ecology Wetlands Section will notify the Ecology Permit Coordination Unit of unresolved conflicts. The Permit Coordination supervisor may assist in resolving the dispute.

Level Three: Conflict resolution is attempted by communication between the WSDOT District Administrator/Assistant District Administrator and the Ecology Shorelands & Coastal Zone Management Program Manager. The Ecology Program Manager will notify the Ecology Regional Director of the dispute.

Level Four: Conflict resolution is attempted by communication between the WSDOT Assistant Secretary for Program Development and the Ecology Assistant Director for Water and Shorelands.

Level Five: The conflict will be resolved by the Secretary of Transportation and the Director of Ecology, or their designees.

IX. Duration of Implementing Agreement

This Implementing Agreement will remain in effect until terminated. Either party may terminate this Agreement upon 30-day written notice to the other. Written notice of termination shall include the reasons for the termination.

X. Revisions to Implementing Agreement

Revisions to this Implementing Agreement may be initiated by either party and will become final after both parties are in agreement and appropriate signatures are attached.

XI. Execution

The undersigned hereby acknowledge and agree that the policies, procedures, and activities identified in this document will guide the parties in an effort of mutual support and cooperation, in order that WSDOT and Ecology may achieve full compliance in their designated activities, and initiate innovative strategies to protect and manage Washington State's wetland resources.

Washington State
Department of Ecology

by (original signed by person named below)
Mary Riveland
Director

Date 7/1/93

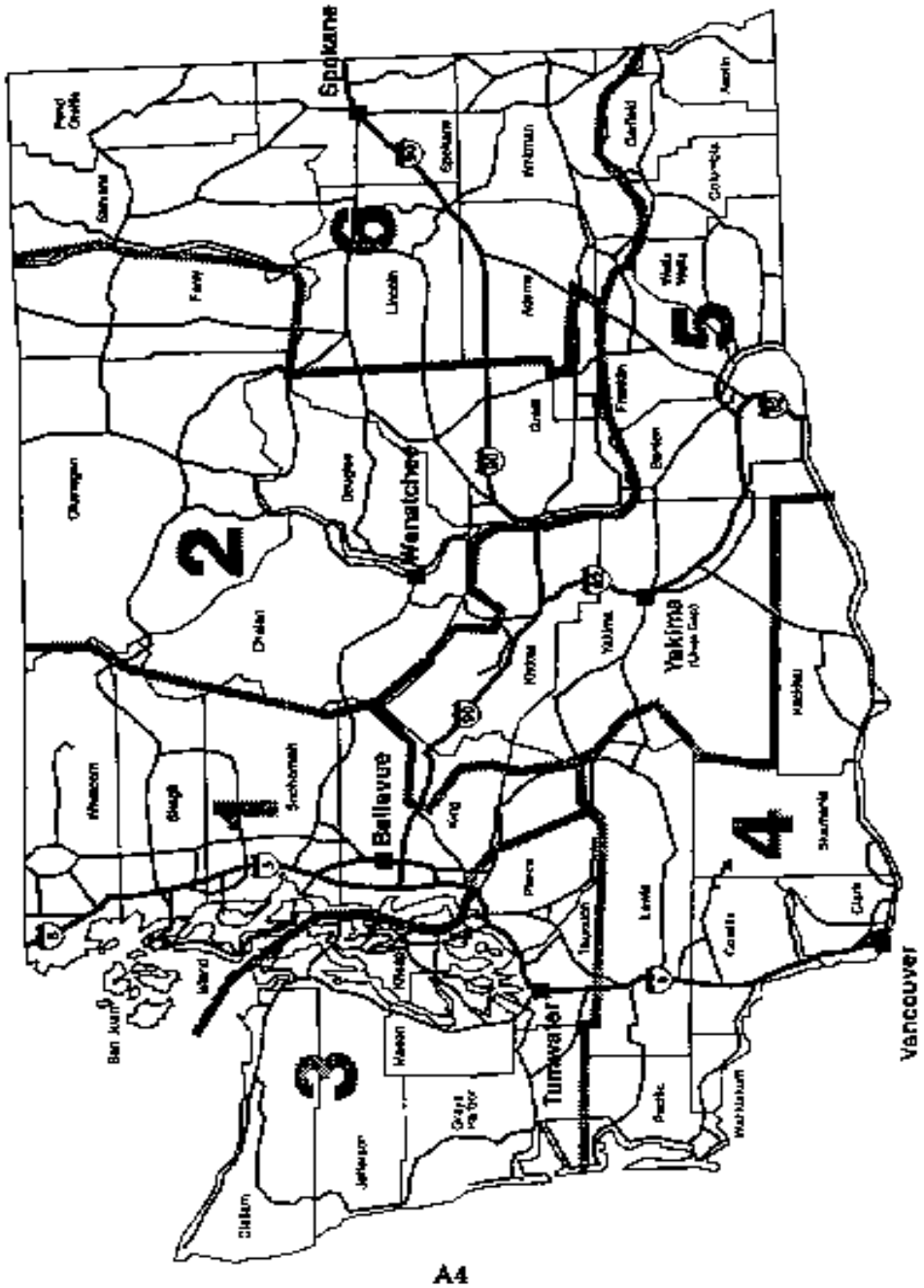
Washington State
Department of Transportation

by (original signed by person named below)
Sid Morrison,
Secretary of Transportation

Date 7/1/93

Appendix A

District Map



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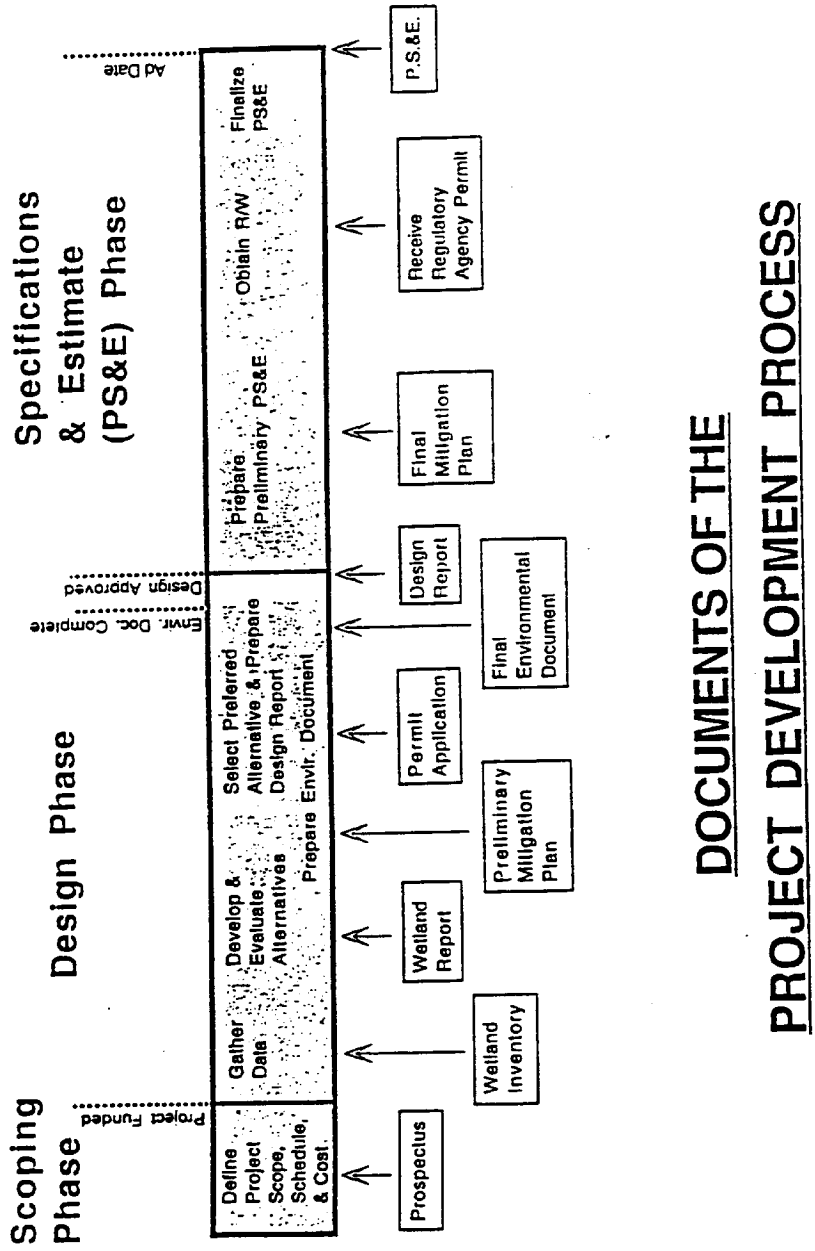
Appendix B

Appendix B



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Appendix C

WSDOT Guidelines for Wetland Reports

Wetland reports are required by regulatory agencies for projects where wetlands may be adversely affected during project construction. At WSDOT, the wetland report supplied to these agencies is composed of two separate elements: the Wetland Inventory Report and Wetland Biology Report. Used to describe and classify wetlands within the vicinity of a proposed highway project, they are requested from a WSDOT wetlands biologist at the earliest stages of project development. The Wetland Inventory Report provides early identification of wetland resources for the consideration of design changes which might avoid and minimize impacts to wetlands. After project alternatives are developed, the Wetland Biology Report is prepared to accurately describe wetlands and other important resources and impacts to these resources for each alternative under consideration. A typical report includes a wetland assessment, an impact assessment, and may include a mitigation proposal. The following sections describe information required in Wetland Inventory Reports and Wetland Biology Reports.

A. Wetland Inventory Report

This document identifies wetlands in the project vicinity at the earliest stages of project development and classifies and evaluates their functions and values. A WSDOT wetland biologist or qualified consultant prepares this report upon request from the District Environmental Manager.

The following information must be provided in a Wetland Inventory Report:

1. Project description
    a. Location
    b. Setting
    c. Geography
    d. Water resources located within the project area (lakes, streams, ponds)
    e. Published inventory information
    f. National Wetland Inventory Map
    g. Hydric soil map and soils information
    h. Aerial photo wetland interpretation (if available)
    i. Local jurisdiction inventory (if available)
    j. Washington Natural Heritage Program data on rare plants, or high quality wetlands
    k. Department of Wildlife Nongame and Priority Habitat information
    l. Federal Emergency Management Agency (FEMA) Flood Insurance Rates maps (if applicable).

2. Wetland identification and location

   Each wetland community on the site should be described by including:

   a. Species composition of each plant community including a map showing plant community boundaries

   b. U.S. Fish and Wildlife (Cowardin) classification

   c. Connection and proximity to nearby water bodies

   d. Known or suspected wildlife use

   e. Evidence of recent or historic disturbances

   f. Habitat features

   g. Characterization of wetland soil

   h. A brief description of adjacent upland plant communities

   i. A description of the wetland buffer

   j. Approximate size of the wetland

   k. A subjective determination of wetland functions and values

   l. Its rating, based on Ecology's *Washington State Wetlands Rating System* (Rating system data sheets should be appended to the report.)

   m. List of potential impacts to wetlands from project implementation if known

3. Wetlands identified within the project area should be mapped and numbered, with corresponding data sheets appended to the report. Wetland location should be listed with reference to milepost, engineers station, toe of slope, or other physical location related to project construction.

   Note: statements concerning whether the wetland is isolated or associated are preliminary and are provided to give an indication of the function of the wetland in the landscape. The U.S. Army Corps of Engineers has the final authority to make this determination.

4. The wetlands identified should be presented in a table format that includes the following information:

   a. Location of wetland by highway stationing or milepost

   b. A subjective determination of wetland functions and values

   c. Wetland category (Department of Ecology rating system).

The Wetland Inventory Report is submitted to the District Environmental Manager with a copy to the Project Engineer. It is used as part of the data for initial development of project design alternatives.

B. Wetland Biology Report

After project alternatives are developed, the WSDOT district requests a Wetland Biology Report from the Wetlands Biologist. The Wetland Biology Report details specific impacts associated with each proposed alternative. While it includes some of the information from the Wetland Inventory, it is far more specific regarding plant and animal communities. The Wetland Biology Report should provide detailed information on how wetland functions and values will be adversely affected by the proposed project. The report should discuss the effects of both direct impacts (e.g., filling, dredging, clearing, and alterations to wetland hydrology) as well as indirect impacts (increased intrusion, increased noise, light, and glare, etc.) on each wetland. Water quality impacts (e.g., sedimentation, nutrients, hydrocarbons, and toxics) should also be discussed. The report should estimate the area of each wetland. The Wetland Biology Report should also include specific information on how the boundary of the wetland was determined. The report must include the general information found in the Wetland Inventory Report in addition to the following information:

1. A complete set of the field data forms filled out during the wetland determination and delineation
2. The site map showing wetland boundaries and locations of all data points
3. Topographic map of the area
4. The site designation on a National Wetland Inventory map
5. The site designated on local wetland inventories (if available)
6. The site designated on a Soils Survey Report soils map

WSDOT project staff use the Wetland Biology Report to evaluate the location and design alternatives to avoid and/or minimize impacts to wetlands. Wetland acreage and areas of unavoidable impact are determined after the alternatives have been evaluated. This information is used as the basis for determining the size and type of wetland mitigation needed.

The Wetland Biology Report should include a discussion on how the project has been designed (and how it could be modified) to avoid and minimize adverse impacts to wetlands. An estimate of the amount and time of mitigation required to compensate for wetland impacts should be discussed.

Appendix D
WSDOT Guidelines For Wetland Mitigation Plans

The Washington State Department of Transportation (WSDOT) has developed these guidelines to provide format and contents requirements for wetland mitigation plans (WMP) and reports. The guidelines apply in the preparation of mitigation plans associated with regulatory agency permit requirements.

Agencies responsible for project review and permit certifications are developing guidelines for wetland mitigation reports, plans, and monitoring. The Department of Ecology, the U.S. Army Corps of Engineers (Corps), and the Environmental Protection Agency mitigation plan guidelines were considered in the preparation of these guidelines. WSDOT Wetland Mitigation Plan Guidelines are intended to meet the requirements of each of these regulatory agencies.

If wetlands are encountered in a project, the following activities are normally required: 1) a wetland report is prepared, identifying the location and value of wetlands in the project vicinity; 2) alternatives that would reduce or eliminate impacts to wetlands by changes in location or design of the project are analyzed; 3) a mitigation site is selected that will satisfy requirements for acreage needed for unavoidable wetland impacts; and 4) a wetland mitigation plan is written.

The Preliminary Wetland Mitigation Plan is prepared as the first action in the process of developing a WMP, followed by internal review and resource agency review. The Final Wetland Mitigation Plan is provided to agencies as part of the permit process. These guidelines explain the elements of mitigation plans and detail the essential coordination required.

I. Develop Preliminary Wetland Mitigation Plan

The Preliminary Wetland Mitigation Plan is a draft document for use in early coordination with in-house and resource agency staff. In this document, the project is described, the measures that will be taken to avoid wetlands and reduce impacts are discussed, and the measures proposed to compensate for the impacts are described.

Following are the elements of the Preliminary Wetland Mitigation Plan:

A. Description of the Project

Provide a brief outline of the project proposal, including the following site information:

1. Project name, short description, and location.
2. Wetland information. Include who conducted the delineation (e.g., WSDOT biologist, consultant), which manual was used (1987 or 1989), methodology (routine, intermediate, problem, or disturbed), date(s) field work was performed, data sheets used to establish the wetland boundary and general findings.
3. Vicinity map. U.S. Geological Survey (USGS) Quadrangle (1:1200), National Wetlands Inventory Map (NWI), or other will suffice. Range, Township, and Section should be shown.
4. A large scale map (not smaller than 1:400) and aerial photo if available.

B. Assessment of the Impacted Wetland

Description should be provided of the type and quantity of wetlands that would be impacted. Address vegetation (including canopy structure, indicator status, percent cover and wetland classes) hydrology (water depths, average seasonal flows and/or duration of saturation), soil characteristics, and functions and values. Impacted wetlands should also be rated according to the Department of Ecology's Washington State Wetlands Rating

System, and include a qualitative description of how the wetland functions in the landscape.

This information is available in the Wetland Biology Report prepared for the project.

C. Evaluation of Mitigation Alternatives

The Preliminary Wetland Mitigation Plan should document all early project design changes made to avoid and minimize impacts to wetlands. This information is needed for both Preliminary and Final Wetland Mitigation Plans and demonstrates to reviewing agencies that WSDOT has avoided and minimized impacts to the extent practical. It should follow the mitigation sequence adopted by WSDOT and show how the development of the project design has:

1. Avoided the impact altogether by not taking a certain action or part of an action
2. Minimized impacts by limiting the degree or magnitude of the action and its implementation, using appropriate technology, or taking affirmative steps to avoid or reduce impacts
3. Rectified the impact by repairing, rehabilitating, or restoring the affected environment
4. Reduced or eliminated the impact over time by preservation and maintenance operations during the life of the project
5. Compensated for the impact by replacing, enhancing, or providing substitute resources or environments.

Mitigation steps should be tracked and recorded throughout the project planning and design process. This information can then be incorporated into the Final Wetland Mitigation Plan.

D. Mitigation Project Goals, Objectives, and Performance Standards

Goals are broad statements that define the intent or purpose of the proposal.

Objectives are the direct actions necessary to achieve a specific goal. These should be measurable. Wetlands perform numerous important functions. However, if an objective of the mitigation is to create a function it must be one that can be accurately measured in the field, such as percent cover of wetland vegetation. Water quality improvement is an example of wetland function that is difficult to use as a measurable performance standard.

Performance standards are specific criteria used to evaluate whether the goals and objectives have been met. These must be developed on a site-by-site basis. Performance standards should provide target criteria to be met each year, or every other year, based on reasonably paced progress toward measuring final success.

Describe the long-term goals of the mitigation project. Specifically, identify objectives in the following terms:

1. Size and classification of wetlands to be created, restored, enhanced, or preserved
2. Functions and values to be created, restored, enhanced, or preserved
3. Number of years it is likely to take for the long-term establishment of the proposed functions and habitats
4. The measurable performance standards that will be used to determine if an objective has been met.

E. Description of the Proposed Wetland Mitigation Site

1. Describe pre-construction conditions existing at the proposed site, including vegetation, wildlife and wetlands. Provide a description of the plant community, its cover, classes and structure, and make special note of exotic species and other management concerns that may affect site viability. Wetlands present at the mitigation site must be delineated, assessed and their location indicated on the site map using the format described for a Wetland Report.

2. Explain how hydrology will be provided for the proposed wetland mitigation, including expected seasonal water level fluctuations, seasonal depth to groundwater, or surface water source and water quality.

3. Describe soil classification and series at the site and any soil testing that has been done. Describe amenities that may be needed to improve the soil conditions at the site.

4. Describe how the planned mitigation will fit in the landscape. Discuss the location of the site in relation to its position in the watershed or adjacent upland or wetland habitats or other water resources.

F. Proposed Site Plans

Prepare a general grading and revegetation plan, including:

1. The shape and contour of the mitigation project. Provide sufficient information so that water depths, open water areas, boundary areas, and other features can be visualized. Seasonal ground water and the sources of hydrology for the site should be evident.

2. A list of plants to be used and general planting plan to illustrate the planting concept for the site. Reviewers need to know what species will be planted, in what proportions, and their general locations.

3. Information on the construction sequence and schedule.

4. Steps to be used to minimize damage to surrounding buffers or wetlands during site construction.

5. Methods for controlling invasive species.

6. A description and map of the plant communities which make up the wetland buffer, if a buffer is included in the mitigation design.

G. Maintenance Plan

Describe planned maintenance activities including erosion control and protection of plant materials from herbivores, repairing vandalism, and other activities that may be required over time to ensure that the site viability is maintained.

H. Contingency Plan

A contingency plan is required and must outline the steps that will be taken if performance standards are not met.

I. Mitigation Site Monitoring

A monitoring plan collects the data necessary to measure the success of the mitigation in meeting goals and performance standards established for the site. In the Preliminary Wetland Mitigation Plan, state that monitoring will be conducted for a period of 5 years or longer, if necessary, and that an annual report will be issued by WSDOT to the U.S. Army Corps of Engineers, Department of Ecology, and other federal, state and local resource agencies. A monitoring program must include measures of vegetation,

hydrology, water quality, soils, and wildlife over time. Headquarters Biology conducts the actual monitoring and issues the *WSDOT Wetland Mitigation Monitoring Report*, which is sent to regulatory agencies each year.

II. Coordination

The Preliminary Wetland Mitigation Plan is intended to be reviewed internally by WSDOT Districts, Headquarters Design, Maintenance, and Right of Way staff before circulating to outside agencies. WSDOT District Environmental Managers should coordinate the appropriate review within the District.

The outside agency review follows the internal review. Comments and suggestions made to the Preliminary Wetland Mitigation Plan by outside agencies should be considered in the preparation of the Final Wetland Mitigation Plan.

III. Final Wetland Mitigation Plan

The Final Wetland Mitigation Plan is completed after the Preliminary Wetland Mitigation Plan has been circulated to agencies. It incorporates comments from agencies and the public (and comments from draft environmental documents, if applicable). The Final Wetland Mitigation Plan is the document of record.

IV. As-Built Plans

Within a month of construction and planting completion, as-built plans should be sent to the lead agency, including an as-built topographic survey, plant species and quantities used, photographs of the site, and notes about any changes to the original approved plan. Also list the contractor's responsibility concerning plant replacement, fertilization and irrigation, protection from wildlife, and contingency plan requirements.

Examples of Goals and Standards of Success

WSDOT's publication *Success Standards for Wetland Mitigation Projects – A Guideline* (August 1999) provides assistance in the development of objectives and standards of success for wetland mitigation projects. Guidelines include elements of a well-defined project, overview of mitigation planning projects, selecting performance objectives, writing success standards, monitoring methods, and contingency measures. The publication can be viewed at the following web site:

http://www.wsdot.wa.gov/environment/

Click on Wetland Information, then Wetland Related Publications, then Wetland Mitigation Success Standards.

Appendix E
Guideline For Compensation Mitigation Ratios

Compensation acreage depends on the category of the wetland impacted and the category of wetland to be created. WSDOT agrees to a no net loss policy. The type of mitigation proposed, and past history of creating or restoring these types of wetlands, will be taken into account when determining appropriate ratios for the project. Wetlands dominated by exotic species (>80%), or out of kind mitigation, will be negotiated on a case-by-case basis.

IMPACT	**TYPE OF MITIGATION***	
Wetland Category	**Restoration and Creation**	
	CAT II	CAT III
I	4:1	6:1
II	2:1	3:1
III	1 - 1.5:1	1.5 - 2:1
IV	.75 - 1.25:1	1 - 1.5:1

Enhancement

Enhancement of existing wetlands as compensation for the filling of other wetlands is an available option in some circumstances. Enhancement is the augmentation, or increase, of the functions and values of an existing wetland by direct action. If enhancement of an existing wetland is proposed, the ratios are greater than those used for restoration and creation of wetlands, since the wetland already provides some level of functions and values and a net loss of acreage will occur. Because of this, mitigation ratios for enhancement are generally twice that of ratios for restoration/creation. These ratios are only a guideline, the greater the increase in wetland functions and values provided by the enhancement, the lower the ratio can be. In some circumstances, enhancement of other aquatic resources and functions, such as stream or riparian areas, may be acceptable. In these instances, ratios will be negotiated on a case-by-case basis.

Preservation

Preservation may be used to reduce the ratios above for restoration and creation to a minimum of 1:1, and enhancement to a minimum of 2:1, as follows:

- The balance of the area required to meet the ratio in the above table is met by creating or enhancing a buffer around the mitigation site at a ratio of 5:1, or by preserving an existing buffer at a ratio of 10:1. For example, if the balance of the area required to meet the ratio is 1 acre, WSDOT can create a 5 acre buffer around the mitigation site.
- The balance of the area required to meet the ratio in the above table can be met by preserving a Category I wetland at a ratio of 5:1 or a Category II wetland at a ratio of 10:1, that is functionally linked (by habitat or hydrology) with the mitigation site in the same watershed. For example, if the

* Mitigation type is specified in the wetland mitigation plan.

balance of the area required to meet the ratio is 1 acre, WSDOT can preserve a 5 acre Category I wetland.

The highest priority should be given to creating and preserving buffers around mitigation sites. (Any preservation that is not on, or adjacent to, a mitigation site will be allowed only if adequate buffers are provided at the mitigation site.)

Appendix F
List of Invasive/Exotic Plant Species

SCIENTIFIC NAME	COMMON NAME
Agropyron repens	Quackgrass
Alopecurus pratensis, A. aequalis	Meadow foxtail
Arctium minus	Burdock
Bromus tectorum, B. rigidus, B. brizaeformis, B. secalinus, B. japonicus, B. mollis, B. commutatus, B. inermis, B. erectus	Bromes
Cenchrus longispinus	Sandbur
Centaurea solstitialis, C. repens, C. cyanus, C. maculosa C. diffusa	Knapweeds
Cirsium vulgare, C. arvense	Thistles
Cynosurus cristatus, C. echinatus	Dogtail
Cytisus scoparius	Scot's broom
Dactylis glomerata	Orchardgrass
Dipsacus sylvestris	Teasel
Digitaria sanguinalis	Crab Grass
Echinochloa crusgalli	Barnyard grass
Elaeagnus augustifolia	Russian Olive
Euphorbia peplus, E. esula	Spurge
Festuca arundinacea, F. pratensis	Fescue
Holcus lanatus, H. mollis	Velvet grass
Hordeum jubatum	Foxtail Barley
Hypericum perforatum	St. John's wort
Juncus effusus	Soft Rush
Lolium perenne, L. multiflorum, L. temulentum	Ryegrass
Lotus corniculatus	Birdsfoot trefoil
Lythrum salicaria	Purple loosestrife
Matricaria matricarioides	Pineapple weed
Medicago sativa	Alfalfa
Melilotus alba, M. officinalis	Sweet clover

SCIENTIFIC NAME	COMMON NAME
Phalaris arundinaceae	Reed Canary Grass
Phleum pratense	Timothy
Phragmites communis	Reed
Poa compressa, P. palustris, P. pratensis	Bluegrass
Polygonum aviculare, P. convolvulus, P. cuspidatum, P. Iapathifolium, P. persicaria	Knotweeds
Ranunculus repens	Buttercup
Rubus discolor, R. Iaciniatus, R. vestitus, R. macrophyllus	Non-native blackberry
Salsola kali	Russian Thistle
Setaria viridis	Green Bristlegrass
Sisymbrium altissimum, S. Ioeselii, S. officinale	Tumblemustards
Tanacetum vulgare	Tansy
Trifolium dubium, T. pratense, T. repens, T. arvense, T. subterraneum, T. hybridum	Clovers
Cultivated species:	Wheat, corn, barley, rye, etc.

Appendix G
Definitions

Buffer:	A designated area surrounding a wetland that reduces adverse impacts to wetland functions and values from adjacent development and/or land uses.
Preliminary Wetland Mitigation Plan:	A document that includes the transportation project description, project alternatives, wetland impacts from the preferred alternative, and discussion of the mitigation concepts.
Creation:	Actions taken to intentionally establish a wetland at a site where none previously existed (as far as can be determined from historical information).
Enhancement:	Actions taken to intentionally improve wetland functions, processes, and values of existing but degraded wetlands where all three defining criteria are currently met (i.e., hydrology, vegetation, soils). This includes actions taken on "problem" wetlands as identified in the 1989 Delineation Manual.
Final Wetland Mitigation Plan:	A document that includes description of all wetlands in the project area, wetland site plan, wetland revegetation plan, standards of success, operation and maintenance of the mitigation site, and the monitoring plan.
In-Kind Compensation:	Compensation that replaces the same wetland system and class as defined by Cowardin.
Out-of-Kind Compensation:	Compensation that replaces one wetland system and class as defined by Cowardin with another.
Preservation:	Setting aside of wetlands or buffers in their existing condition to protect them in perpetuity as part of a plan for compensatory mitigation.
Reference Site:	An existing wetland that is used as a model for a mitigation site, and that exhibits the same structure and functions as an impacted wetland (for in-kind replacement) or that has acceptable structure and functions (for other types of replacement).
Restoration:	Actions taken to reestablish a wetland area, including its functions and values, that has been eliminated by past actions.
§404 Permit:	A permit issued by the U.S. Army Corps of Engineers under Section 404 of the federal Water Pollution Control Act (Clean Water Act), which authorizes an activity, i.e., discharge of fill material into waters of the United States including wetlands.
Wetland or Wetlands:	Areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps,

	marshes, bogs, and similar areas. Wetlands do not include artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities. However, wetlands may include artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands, if permitted by the appropriate authority.
Wetland Banking:	The off-site creation, restoration, or enhancement of wetlands to compensate for unavoidable wetland losses in advance of a project. A wetland bank is a net gain in wetlands to be drawn upon to offset small wetland losses from several sites or projects.
Wetland Inventory Report:	A report that includes a wetland's description, classification, and extent, and its category and functional values.

References

Washington State Department of Ecology. *Washington State Wetlands Rating System for Western Washington.* Publication #91-57. Olympia, Washington: Washington Department of Ecology, October 1991.

Washington State Department of Ecology. *Washington State Wetlands Rating System for Eastern Washington.* Publication #91-58. Olympia, Washington: Washington Department of Ecology, October 1991.